Lupold

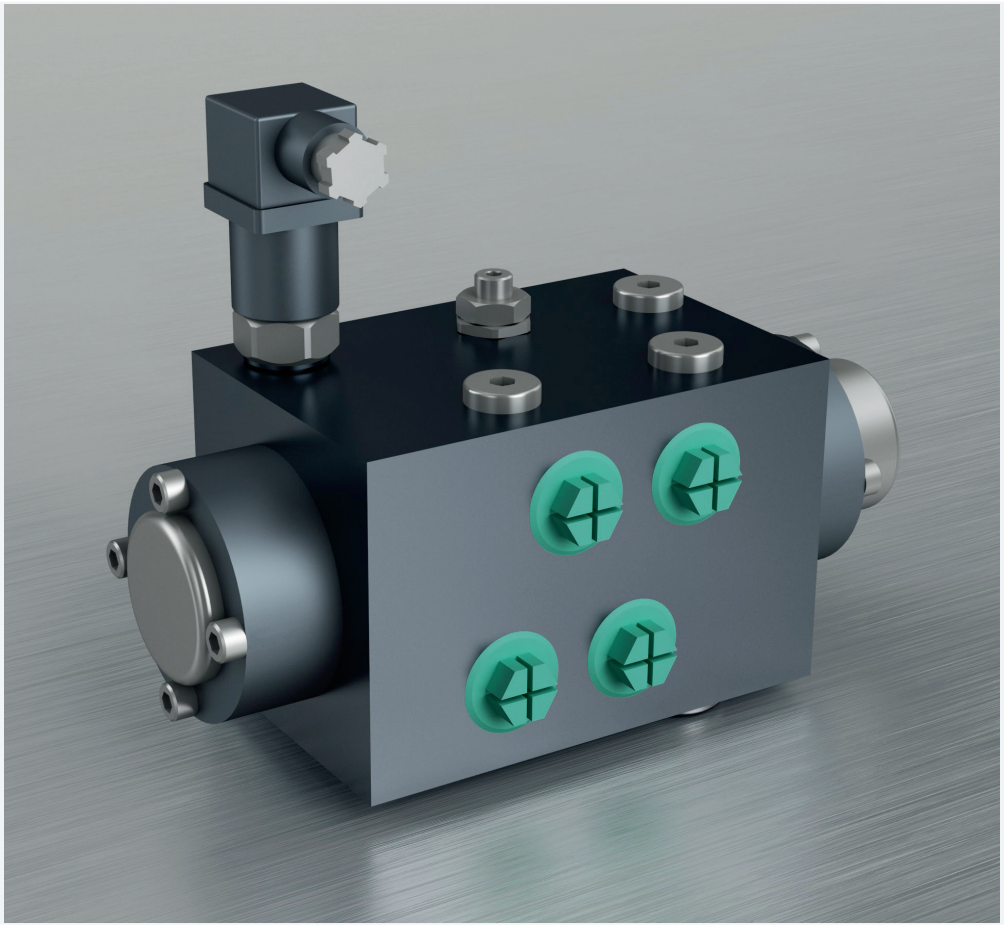
MEMBER OF HYDRAULIK NORD GROUP

PRODUCT DATA SHEET

VB70

Switching block

Pressure-operated self-switching 4/2-way valve block



315 bar
MAX. OPERATING PRESSURE

10–70 l/min
MAX. VOLUME FLOW

–20 to +80 °C
FLUID TEMPERATURE RANGE

CONTENTS

Switching block VB70

Mode of action, variants and technical data

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Document status and rights

Technical data status: ALH E 2.1 / 11.2021

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1. Mode of action

The VB70 operates as a pressure-controlled, self-switching 4/2-way valve. It continuously controls the forward and return strokes of a connected hydraulic cylinder while the oil supply is on.

When oil supply starts, the cylinder first retracts. In the basic position, P is connected to B and A to T.

At switching pressure p2 (factory setting 150 bar), the valve switches over and the cylinder extends: P to A and B to T.

With the differential circuit, rod-side oil is routed to the piston side for rapid traverse until pDiff (factory setting 100 bar) is reached. It is then discharged to tank for the load stroke.

At pressing pressure p1 (factory setting 200 bar), valve changes over and the cylinder retracts until p2 is reached again.

The cycle repeats while oil is supplied. After the supply is switched off, the cylinder remains in position and the valve returns to its basic position.

When supply is restarted, the cylinder retracts first. For the certified versions, this basic-position response is the safety function.

NOTE

Optionally available with integrated pressure switch.

2. Field of application

- Waste presses
- Waste collection vehicles with interchangeable containers
- Baling presses
- Briquette presses
- Barrel and can presses
- Conveyor systems

3. Variants

Variant	Differential circuit	Pressure switch
1	●	●
2		

Figure 1: Circuit diagram: Switching block VB70 with differential, with pressure switch (**variant 1**)

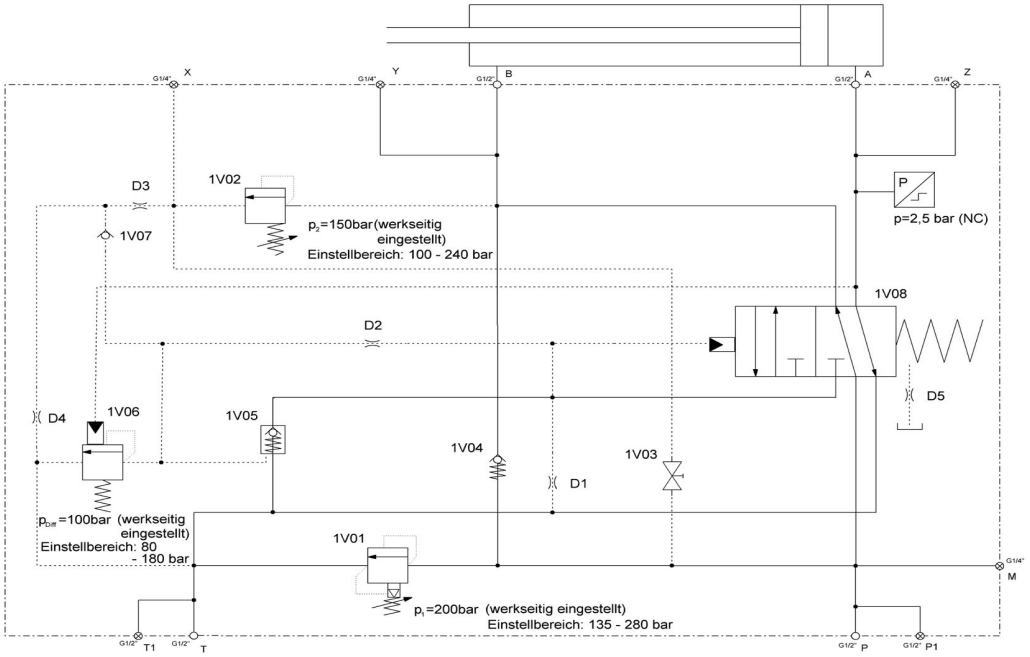
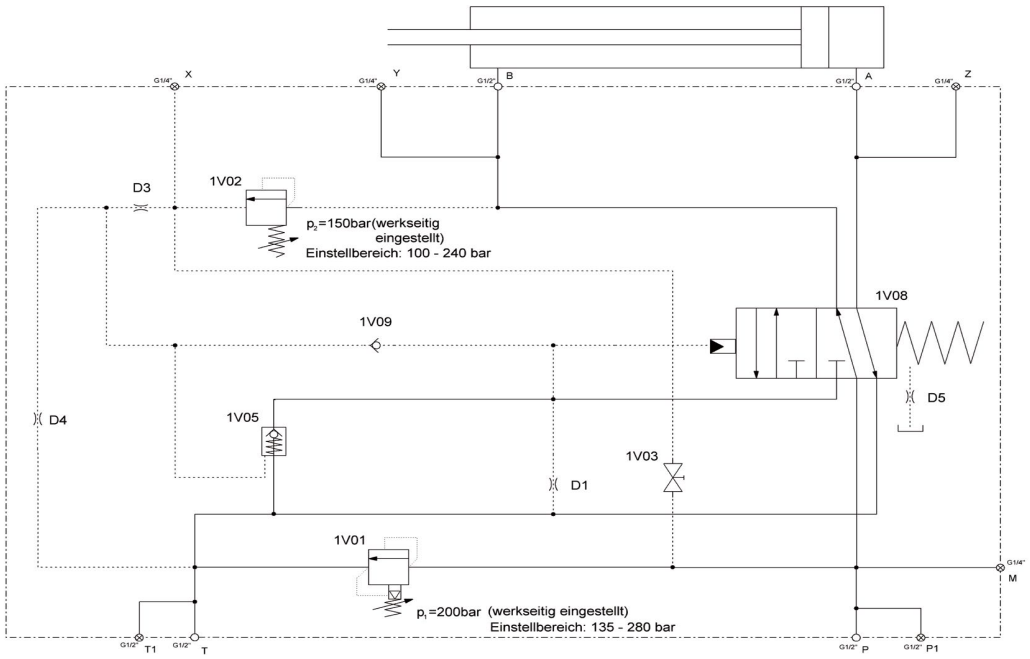


Figure 2: Circuit diagram: Switching block VB70 without differential, without pressure switch (**variant 2**)



3. Variants

Variant	Differential circuit	Pressure switch
3	●	
4		●

Figure 3: Circuit diagram: Switching block VB70 with differential, without pressure switch (**variant 3**)

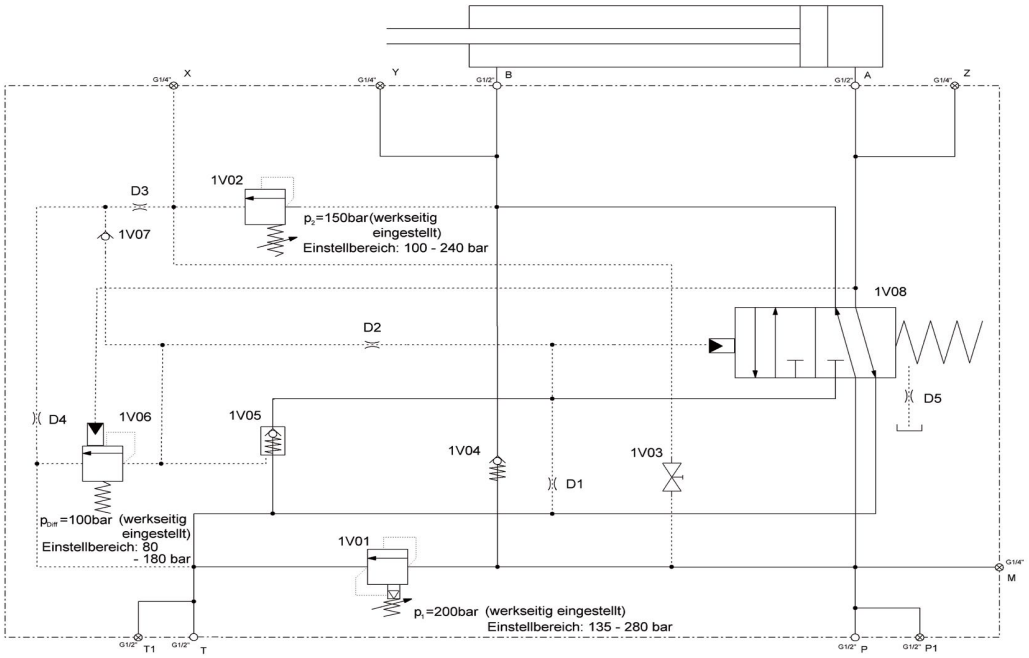
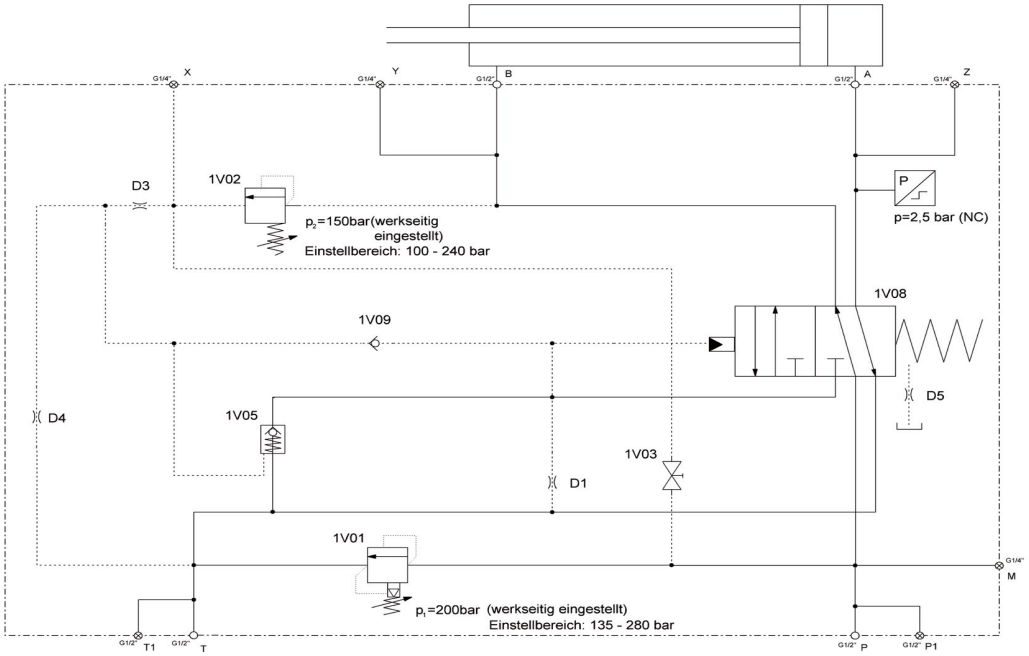


Figure 4: Circuit diagram: Switching block VB70 without differential, with pressure switch (**variant 4**)



4. Technical data

Max. operating pressure pmax	**315 bar**
Pressing pressure p1	**200 bar (factory setting)**
Pressure relief valve setting range p1	**135–280 bar**
Max. pressure at ports A, B, P, P1	**315 bar (data sheet value)**
Max. pressure at ports T, T1	**120 bar**
Max. volume flow Qpump max	**10–70 l/min**
Max. return flow A to T	**140 l/min**
Switching pressure p2	**150 bar (factory setting)**
Setting range p2	**100–240 bar**
Differential switch-off pDiff	**100 bar (factory setting)**
Setting range pDiff	**80–180 bar**
Ambient / fluid temperature	**–20 to +50 °C / –20 to +80 °C**
Hydraulic fluid	**Mineral oil HL/HLP (DIN 51524-1/-2); HEES on request**
Viscosity / filtration	**10–500 mm²/s (cSt) / max. 25 µm**
Contamination class	**ISO 4406 class 20/18/15**
Ports P, P1, A, B, T, T1 / M, X, Y, Z	**G 1/2 / G 1/4**
Mounting	**Direct piping or subplate mounting**

TÜV-certified safety function

VB70.002V1–V4 · up to PL d / SIL 2 · B10d: 1,500,000 cycles

On removal of the oil supply, the 4/2-way valve returns to its basic position, corresponding to cylinder retraction.

Certificate Z10-003842-0001 Rev. 01:

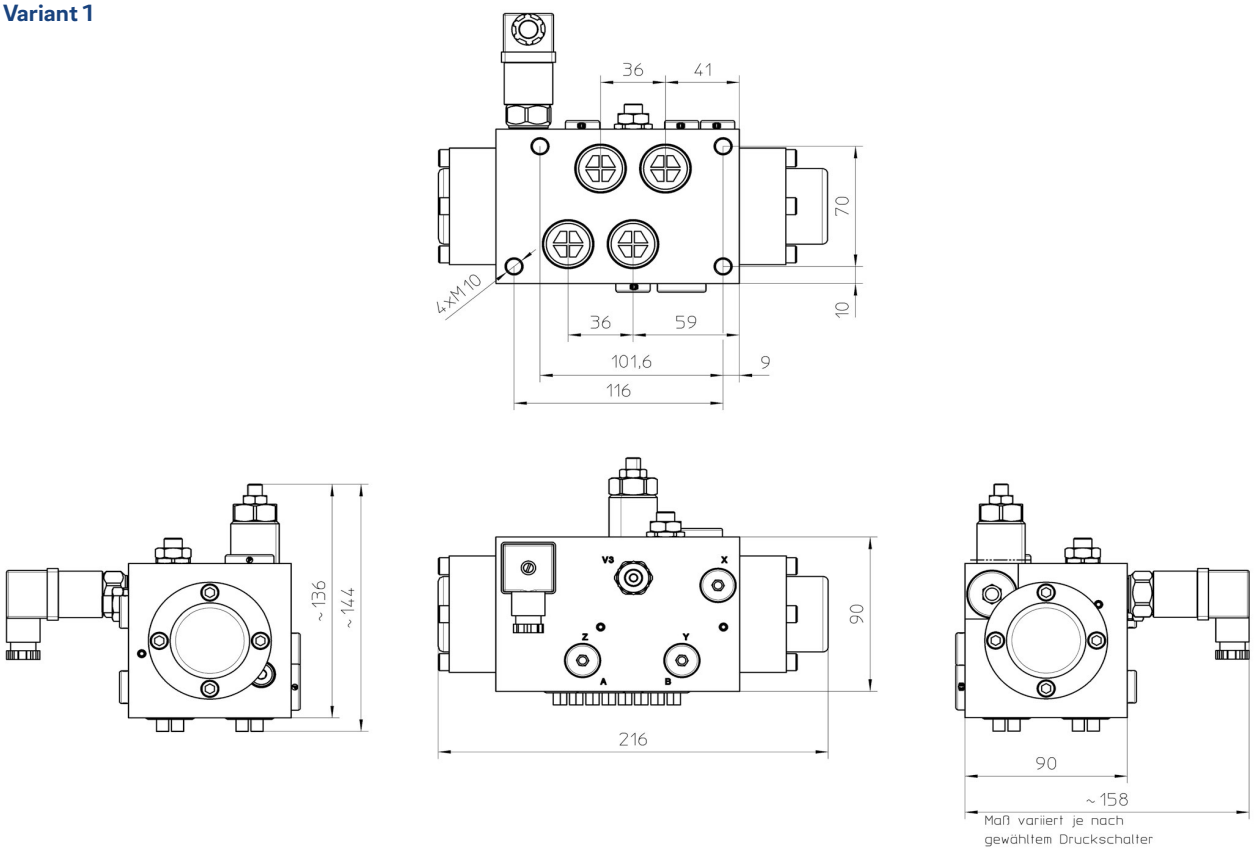
A, B, P, P1: up to 280 bar in the certificate scope.

Data sheet limits and certified operating conditions must be checked for the application.

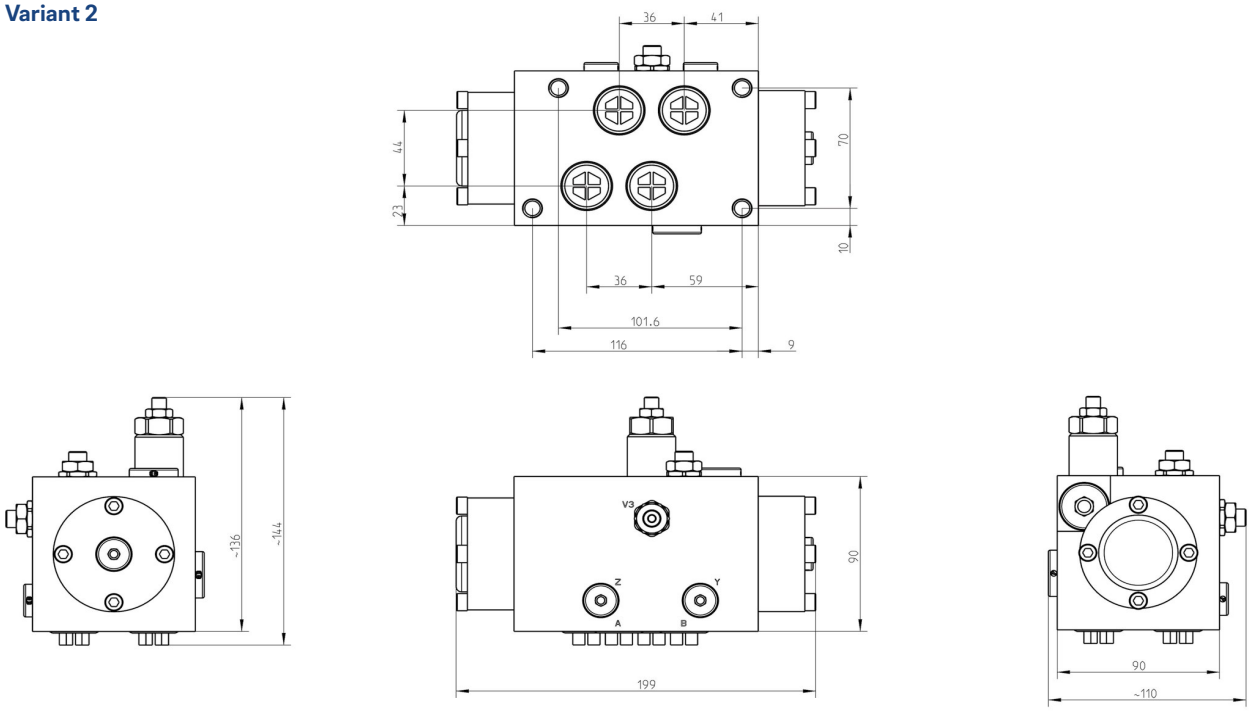
5. Dimensions

Dimensions in mm

Variant 1



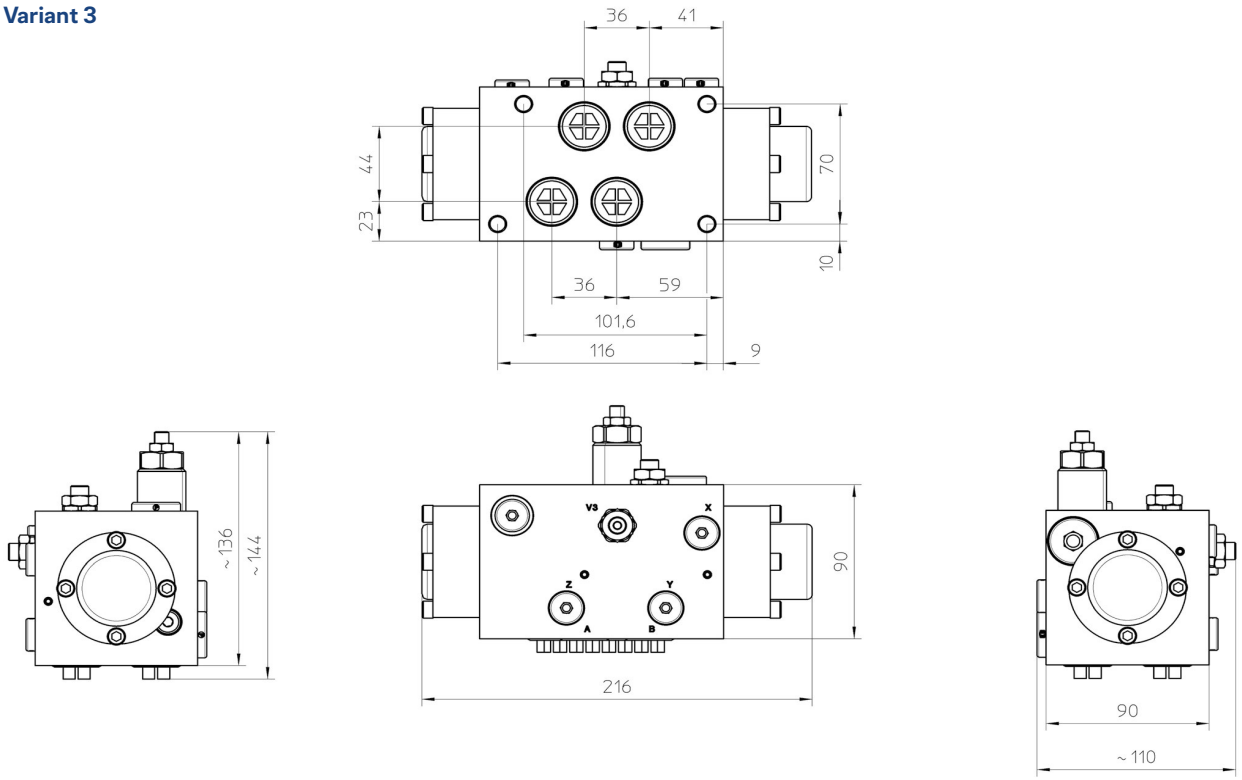
Variant 2



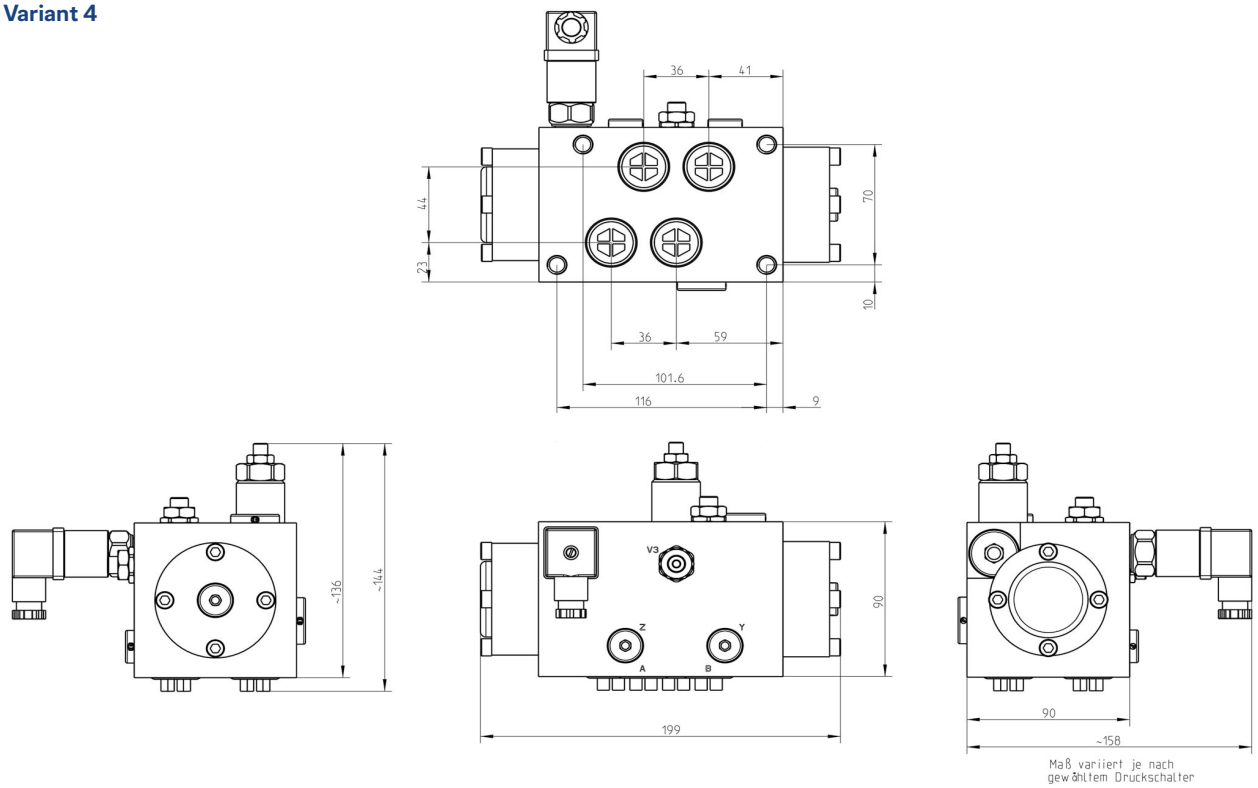
5. Dimensions

Dimensions in mm

Variant 3



Variant 4



Notes

Project, configuration and application requirements

Switching block VB70

YOUR ENQUIRY

Andreas Lupold Hydrotechnik GmbH

Ferdinand-Porsche-Str. 3
72189 Vöhringen · Germany

+49 7454 944-0

Send an enquiry

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